Casting Nodular Iron Crankshafts for Diesel Locomotives

0,008% and the appearance of dots (i.e. magnesium sulphide) is prohibited. There are 3 photographs, 12 graphs and 3 diagrams.

ROTENBERG, M.I., inzh.; SEMENOV, R.A., inzh.; BOGATYREV, V.G.

Automatic ultrasonic unit for checking bushings. Vest.mash. 39 no.3:43-45 Mr '59. (MIRA 12:4)
(Ultrasonic waves--Industrial applications)

18(5,7) SOV/128-59-5-4/35

AUTHOR: Soldatenko, V.I., and Rotenberg, M.I., Engineers

TITLE: Method of Minimizing Non-Metalic Inclusions in Magnesium Iron

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 5, pp 7-8 (USSR)

ABSTRACT: In the Diesel locomotive engine plant at Kolombesk, it rather often happened that non-metallic inclusions took place when using magnesium iron. The ratio of the magnesium contents in the iron to the depth of the non-metallic inclusions can be seen in Fig.(1). The new method for removing the non-metallic inclusions is based on the process of heating 70% of the iron which has to be treated with magnesium up to 1450-1460°C. in an electro-furnace and 0.4 -0.5% magnesium are added. The remaining 30% of the cast iron is heated up to 1550-1600°C. After cooling down the iron which has been treated with magnesium to 1380 - 1400°C both parts are cast together, a temperature of 1450°C. resulting. At this temperature a dry piece of wood

Card 1/2

Method of Minimizing Non-Metallic Inclusions in Magnesium Iron

is drawn through the molten mass for 2-3 minutes. At a temperature of 1390 - 1420°C the treated thus iron is cast into molds. There are 1 diagram and 5 Soviet references

ROTENBERG, M.I.

X-ray image of the esophagus in the elderly individual. Vest. rent. i rad. 39 no.5:65 S-O '64. (MIRA 18:3)

1. Rentgeno-radiologicheskoye otdeleniye (zav. M.I. Rotenberg) Khar'kovskoy oblastnoy klinicheskoy bol'nitsy.

SOV/128-59-10-7/24

12(4,5)

AUTHORS: Rotenberg, M.I., and Zapol'skaya, A.V., Engineers

TITLE: Nitrogenizing of Diesel Locomotive Cast Iron Crankshafts

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 10, pp 24-27 (USSR)

ABSTRACT: The authors present a report on experiences of nitrogenizing cast iron for diesel locomotive crankshafts. In the Kolomenskiy teplovozostroitel'nyy zavod (Kolomna Diesel Locomotive Factory), the engine for a new, high power trunk line diesel locomotive is planned with a cast crankshaft of magnesium cast iron. To find optimum conditions for the nitrogenizing, and to determine parameters for the hardness and depth of the nitrogenized ply, laboratory experiments were made. Parallel with this, the influence has been examined of: 1) The nitrogenizing temperature; 2) the microstructure and hardness of a) the surface layer and b) the core on: 1) the mechanical qualities of the core and 2) their way of changing. For the elaborating of the processes, the necessity of a ply depth up to 0.4 mm with a surface hardness of at least 450 H_V was assumed. Table 1 shows the chemical composition of the tested sam-

Card 1/2

Nitrogenizing of Diesel Locomotive Cast Iron Crankshafts

ples. The samples were nitrogenized in a laboratory furnace with a muffle of 280 mm diameter and 350 mm depth. The temperature was regulated automatically. Each one of the samples was nitrogenized under the same condition, after a different preliminary heat treatment. The results of the tests are shown in table 3. Table 4 gives data on the definition of mechanical qualities of the core. At the present time, performance tests are being conducted with the cast iron, and nitrogenized crankshafts of engine D-45. There are 2 photographs, 1 diagram, 3 graphs and 4 tables.

SOV/122-59-3-13/42

AUTHORS: Rotenberg, M.I., Semenov, R.A. (Engineers) and Bogatyrev, V.G.

TITLE: An Automatic Installation for the Inspection of Bearing Inserts by the Ultrasonic Method (Avtomatizirovannaya ustanovka dlya kontrolya vkladyshey ul'trazvukovym metodom)

PERIODICAL: Vestnik Mashinostroyeniya, 1959, Nr 3, pp 43-45 (USSR)

ABSTRACT: To inspect bi-metal bearing inserts for full adhesion with the anti-friction layer, ultrasonic detection by probes with rubber diaphragms was used at the Kolomna Diesel Locomotive Works (Kolomenskiy Teplovozostroitel'nyy Zavod) "Imeni V.V.Kuybysheva" as described in "Vestnik Mashinostroyeniya, 1957, Nr 9. This method depended on the operator's skill. The rubber diaphragm had a short service life. An insert of 250 mm diameter and 150 mm length took 15 minutes to inspect. After testing various modifications, the present authors have developed an automatic installation consisting of an ultrasonic detecting unit, type 86IM2, an electronic signal emitter, a rotating bath filled with liquid and a lifting mechanism. After immersing the insert to be

Card 1/3

An Automatic Installation for the Inspection of Bearing Inserts by the Ultrasonic Method

inspected into the liquid bath, the probes attached to fittings on a rack are lowered to the level of the bottom face of the insert. When the bath is rotated and the rack displaced vertically, the ultrasonic ray describes a helical line in relation to the insert. A defect is recorded on the cathode ray tube screen of the ultrasonic unit and simultaneously by the electronic signal emitter which lights up an indicator lamp. The block diagram of the installation is shown in Fig 2 and a description of the general layout is given. Water has replaced transformer oil as a bath liquid, because the splashing of the oil spoils the cleanliness of the installation. This necessitated a special probe design. Moreover the demand for increased sensitivity called for a replacement of quartz plates with barium titanate having a much greater piezo-electric effect. The 12 mm diameter, 1 mm thickness barium titanate plate is bonded to the probe face with phenolic or epoxide resin. The probe design is shown in cross-section in Fig 3. An output signal of

An Automatic Installation for the Inspection of Bearing Inserts by the Ultrasonic Method

several volts is obtained which deflects the cathode ray and is used as an input to the electronic signal emitter, the circuit of which is shown in Fig 4. The emitter constitutes a trigger system. After triggering, the circuit is returned to the initial state by a push button. The signal emitter was necessary because of the excessively short duration of a defect impulse, incapable of operating an electromagnetic relay. To detect defects below 0.8 cm^2, special step-down probe fittings are required (illustrated in Fig 5).

Card 3/3 There are 5 figures, including 1 photograph.

LIFANOV, V.A., kand. tekhn. nauk, dotsent; LORM, A.G., inzh.; ROTENBERG, M.I., inzh.

Method for the automatic synchronization of synchronous machines. Izv. vys. uchab. zav.; energ. 7 no.10:84-87 O '64. (MIRA 17:12)

1. Chelyabinskiy politekhnicheskiy institut.

SOV-128-58-7-18/20

AUTHORS: Rotenberg, M.I., and Soldatenko, V.I., Engineers

TITLE: Letter to Editors (Pis'mo v redaktsiyu)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 7, p 32 (USSR)

ABSTRACT: This is a letter of justification by the authors who had published an article "Casting Complex Parts of Magnesium Iron", in "Liteynoye proizvodstvo", Nr 2, 1955, and were accused by Bobrov and Zimin of presenting the work of others as their own.

1. Iron-magnesium alloys--Casting

Card 1/1

ROTENBERG, M.I., inzhener; SOLDATENKO, V.I., inzhener.

Casting magnesium-iron cylinder heads for internal combustion engines. Lit.proizv. no.11:23-25 N '56. (MLRA 10:1)
(Magnesium-iron alloys) (Machine molding (Founding))
(Gas and oil engines)

SOLDATENKO, Vladimir Ivanovich; ROTENBERG, Moisey Isakovich; GRUSHEVSKAYA, G.M., redaktor izdatel'stva; MODEL', B.I., tekhnicheskiy redaktor

[Experience in introducing new founding techniques] Opyt vnedreniia novoi liteinoi tekhnologii. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1957. 70 p. (MIRA 10:5)
(Founding)

ROTENBERG, M.I.; RADETSKIY, F.P. (Kherson)

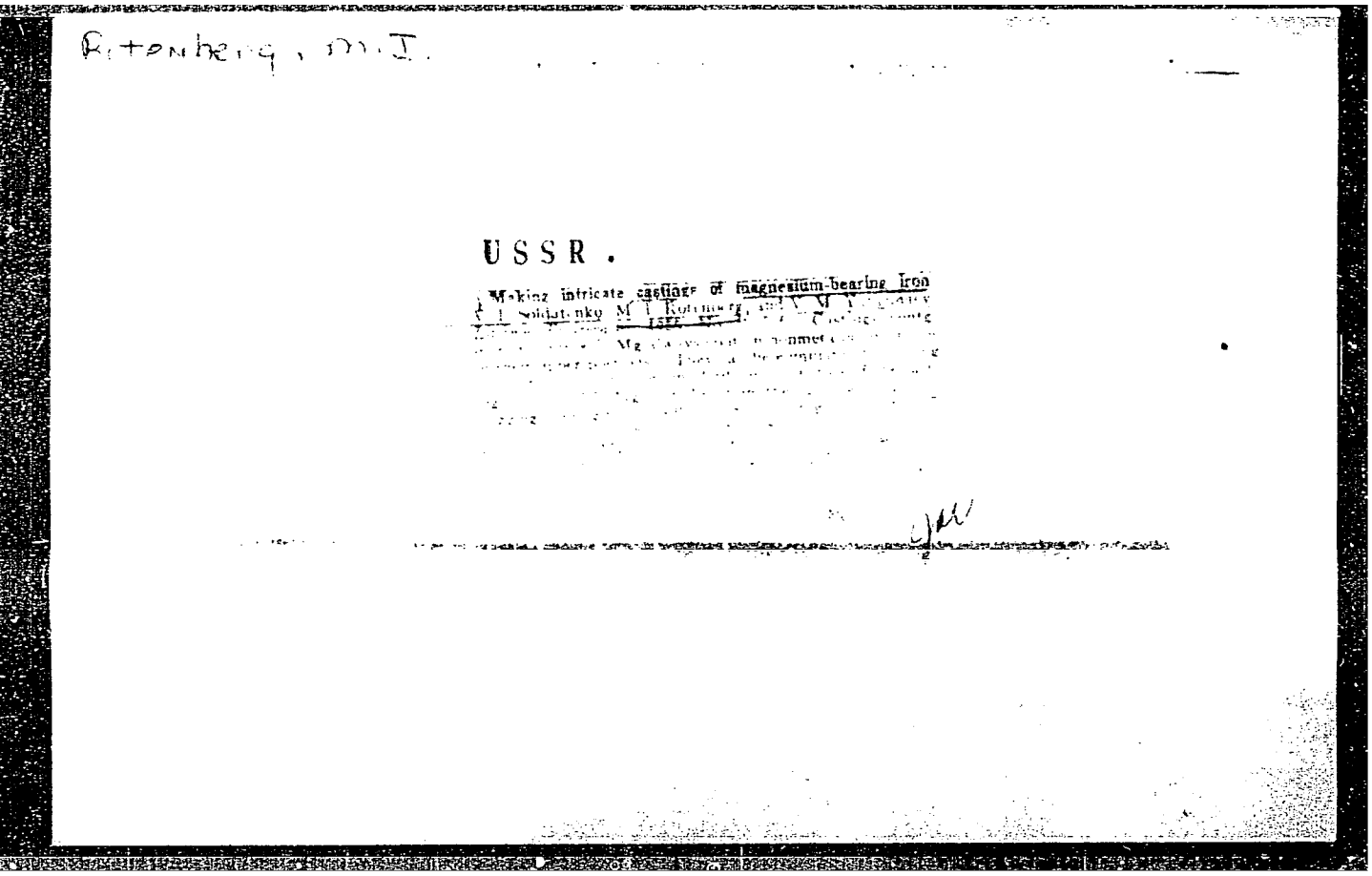
Case reports of primary cancer of the lower portion of the duodenum.
Klin.med.34 no.11:67-69 N '56. (MLRA 10:2)

1. Iz Gorodskoy bol'nitsy No.1 Khersona (glavnyy vrach N.N. Gerasimenko)
(DUODENUM, neoplasms
diag. of cancer of lower portion)

ROTENBERG, M.L., MEL'NIKOVA, Ye.A.; POLYAKOV, Ya.G., inzhener, redaktor; GOLOVIN, S.Ya., inzhener, redaktor; TIKHONOV, A.Ya., tekhnicheskiy redaktor.

[Mastering the casting of crankshafts from spheroidal graphite iron] Osvoenie otlivki kolenchatykh valov iz chuguna so sferoidal'nym grafitom. Moskva, Gos.nauchno.-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1954. 16 p. (Moscow. Vsesoiuznyi proektno-tekhnologicheskii institut. Obmen tekhnicheskim opytom, no.13)
(MLRA 9:8)

(Cranks and crankshafts) (Founding)



Rotenberg, M. I.

USSR.

Making intricate castings of magnesium-bearing iron

ROTENBERG, M.I. (Poltava)

Diagnosis of diverticuli of the esophagus. Klin.med. no.10:148-153 '61. (MIRA 14:10)

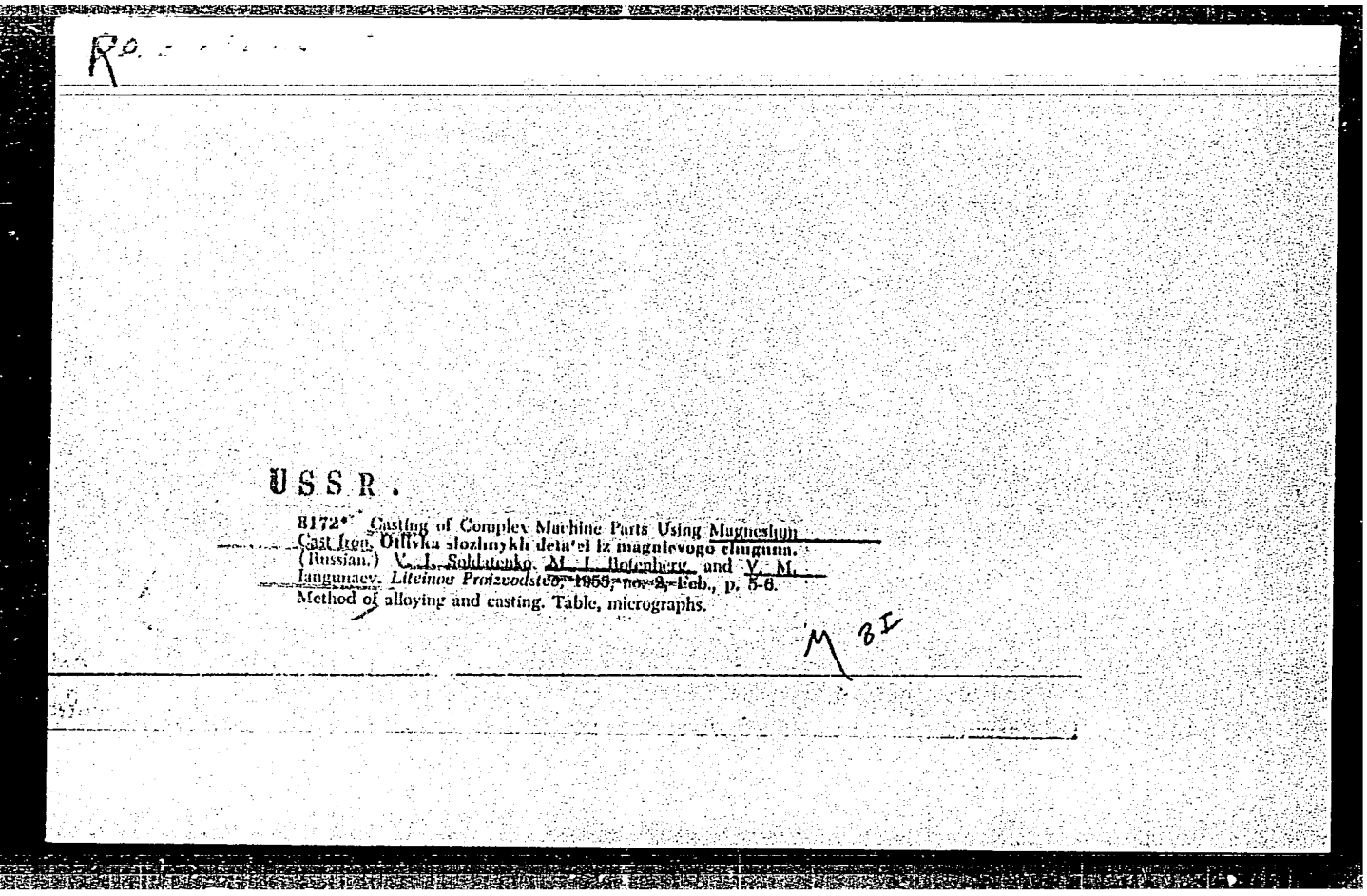
1. Iz rentgeno-radiologicheskogo otdeleniya (zav. M.I. Rotenberg) Poltavskogo oblastnogo onkologicheskogo dispansera (glavnyy vrach S.I. Moiseyev, nauchnyy rukovoditel' - zasluzhennyy deyatel' nauki prof. S.A. Reynberg).

(ESOPHAGUS--DISEASES)

ROTENBERG, M.I.

Fibroma of the stomach. Nov.khir.arkh. no.5:115 S-O '59.
(MIRA 13:3)

1. Khersonskaya gorodskaya bol'nitsa No.1.
(STOMACH--TUMORS)



USSR.

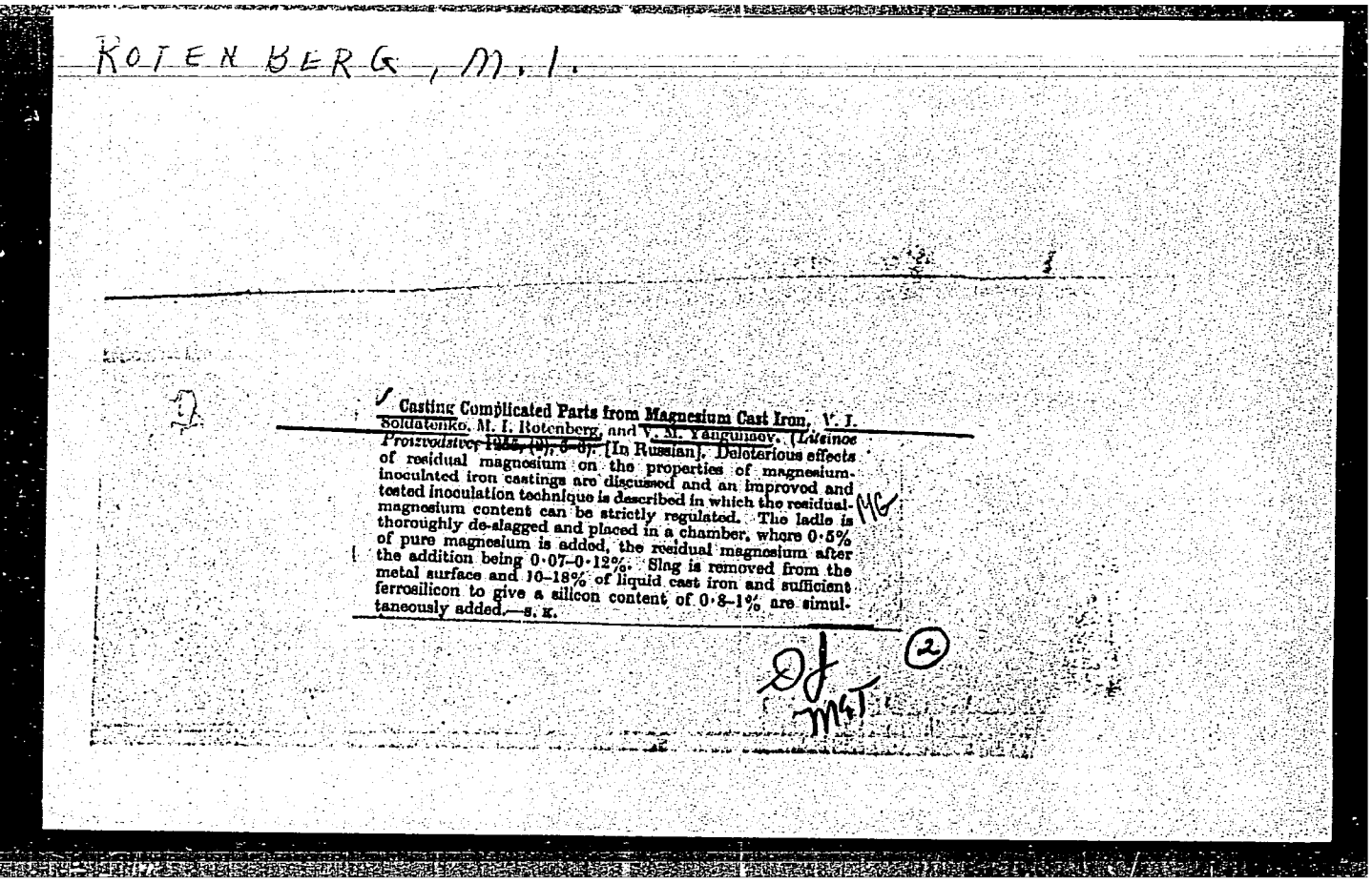
8172* Casting of Complex Machine Parts Using Magnesium Cast Iron. Otlivka slozhnykh deta'ei iz magnievogo chugunn. (Russian.) V. I. Soldatenko, M. I. Rotenberg, and V. M. Iangunaev. *Liteinoe Proizvodstvo*, 1955, no. 2, feb., p. 5-8. Method of alloying and casting. Table, micrographs.

M 8I

ROTENBERG M.I.

1402* Making Hollow Cores in Small-Scale Production. HG
Izgotovlenie obolochkovykh sterzhnei pri melkoseriinom proizvodstve. (Russian.) M. I. Rotenberg, V. I. Soldatenko, and A. P. Shkarin. *Liteinoe proizvodstvo*, 1955, no. 10, Oct., p. 1-3.

Describes application of casing molds for small-scale mass-casting. It is very economical for production line use, as well as for small-scale operation. Gives details of mechanization of the above process. Tables, diagrams, photograph.



ROTENBERG, M. I.

Casting Complicated Parts from Magnesium Cast Iron. V. I. Soldatenko, M. I. Rotenberg, and V. M. Yagunnov. (*Liteinoe Proizvodstvo* 1955, (9), 5–6). [In Russian]. Deleterious effects of residual magnesium on the properties of magnesium-inoculated iron castings are discussed and an improved and tested inoculation technique is described in which the residual-magnesium content can be strictly regulated. The ladle is thoroughly de-slagged and placed in a chamber, where 0·5% of pure magnesium is added, the residual magnesium after the addition being 0·07–0·12%. Slag is removed from the metal surface and 10–18% of liquid cast iron and sufficient ferrosilicon to give a silicon content of 0·8–1% are simultaneously added.—S. K.

ROTENBERG,M.I.; SOLDATENKO,V.I.; MEL'NIKOVA,Ye.A.

Technology of founding magnesium cast iron crankshafts. Lit.proizv. no.9:22-24 S'55. (MLRA 8:12)
(Iron-magnesium alloys) (Cranks and crankshafts)

SOLDATENKO, V.I.; ROTENBERG, M.I.; YANGUNAYEV, V.M.

Casting complicated parts from magnesium-iron alloy. Lit.proizv. no.2:5-6 F '55. (MIRA 8:4)
(Iron-magnesium alloys) (Founding)

ROTENBERG, M. M.

Ivanitskaya, O. S. and Rotenberg, M. M. "On the relativistic theory of the optical vortex effect," Trudy Fiz.-tekhn. in-ta (Akad. nauk Uzbek SSR(, Vol II, Issue 2, 1949, p. 67-71

SO; U-5241, 17 December 1953, (Letopis 'Zhurnal 'nykh Statey, No. 26, 1949)

L 38885-66

ACC NR: AP6017627 (A) SOURCE CODE: UR/0113/66/000/002/0027/0030

AUTHOR: Rotenberg, R. V. (Doctor of technical sciences); Burlachenko, N. I.

ORG: None

TITLE: Physiological criteria for smoothness of automobile operation

SOURCE: Avtomobil'naya promyshlennost', no. 2, 1966, 27-30

TOPIC TAGS: physiology, accelerometer, automotive industry, oscillograph, vehicle engineering

ABSTRACT: The authors give the results of tests for determining the physiological criteria for smoothness of automobile operation as experienced by man. One of the main criticisms of the work done so far is the use of artificial measuring devices instead of human reactions. The tests carried out by the authors included 36 men from 20 to 50 years of age. Vertical acceleration was recorded at the head and spine. Pickups were glued to the head and spine and their signals were transmitted to an oscillograph. The first stages of the testing included periodic action such as appears in walking or running at various speeds. The second stage tested unique actions such as jumping from various heights. Graphs are given of the various oscillograms. It can be seen from the curves that vertical acceleration for man changes according to an anharmonic law. The mechanics of walking are discussed. Statistical methods were

Card 1/2

UDC: 629.113:62-58.001.5

L 38685-66

ACC NR: AP6017627

0

used for data analysis. The accumulated data are used to set up a scale of criteria for smoothness of operation in evaluating automobile suspensions and other devices of this type. The upper permissible limit of acceleration for man in the case of unique action is 2.8-3.0 g. The results show that physiological criteria for smoothness of automobile operation should account for the acceleration which is experienced by man under ordinary circumstances such as walking, running and jumping. Man senses motion through his head, and the neck acts as a flexible connection through which vibration is transmitted to the body. The permissible acceleration for the body, not the head, must be considered in order to avoid exaggeration of the requirements for automobile operating smoothness. A frequency range of 1.7-3.0 cps is characteristic of man's most natural motion -- walking. Vertical acceleration during relaxed walking was set as the comfort limit. Acceleration during average fast walking may be used as the limit for comfortable travel. The upper limit for acceleration should be based on the transition from walking to running. The qualitative recommendations for a man of 20 to 50 years are: comfort limit ±0.23 g; limit of comfortable travel ±0.75 g; The permissible limits for smoothness of operation in a course of action of short duration are 0.1 g for upward motion of the body and 1.7 g for downward motion of the body. The upper permissible limit for unique action is 2.8-3.0 g for downward motion of the body. While the work was done to estimate operational smoothness in automobiles, it should also be applicable to other purposes. Orig. art. has: 6 figures.

SUB CODE: 13, 06/SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card 2/2 LC

ROTENBERG, R.V., doktor tekhnicheskikh nauk.

Methods of testing automobiles for vibration and a comparative evaluation. Avt. i trakt. prom. no.2:23-26 F '57. (MLRA 10:3)
(Automobiles--Vibration)

ROTENBERG, R.V., kand.tekhn.nauk

Transient vibrations of automobiles. Avt.i trakt.prom. no.8:14-20 Ag '57. (MIRA 10:12)
(Automobiles--Vibration)

GOL'D, Boris Vasil'yevich, dots.; FAL'KEVICH, Boris Semenovich, prof.; LIPGART, A.A., prof., retsenzent; TSIMBALIN, V.B., dots., retsenzent; ROTENBERG, R.V., doktor tekhn.nauk, red.; NAKHIMSON, V.A., red.izd-va; TIKHANOV, A.Ya., tekhn.red.

[Theory, construction, and design of automobiles] Teoriia, konstruirovanie i raschet avtomobilia. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 535 p. (MIRA 11:3)

1. Kafedra kolesnykh mashin Moskovskogo vysshego tekhnicheskogo uchilishcha imeni Baumana (for Lipgart). 2. Kafedra avtomobiley Gor'kovskogo politekhnicheskogo instituta (for TSimbalin)
(Automobiles--Design and construction)

LITVINOV, A.S.; ROTENBERG, R.V.; FRUMKIN, A.K.; FAL'KEVICH, B.S., doktor tekhn. nauk, retsenzent; PETROV, V.A., kand. tekhn. nauk, retsenzent; VOLKOV, P.M., doktor tekhn nauk; YEGORKINA, L.I., red.izd-va; MODEL', B.I., tekhn. red.

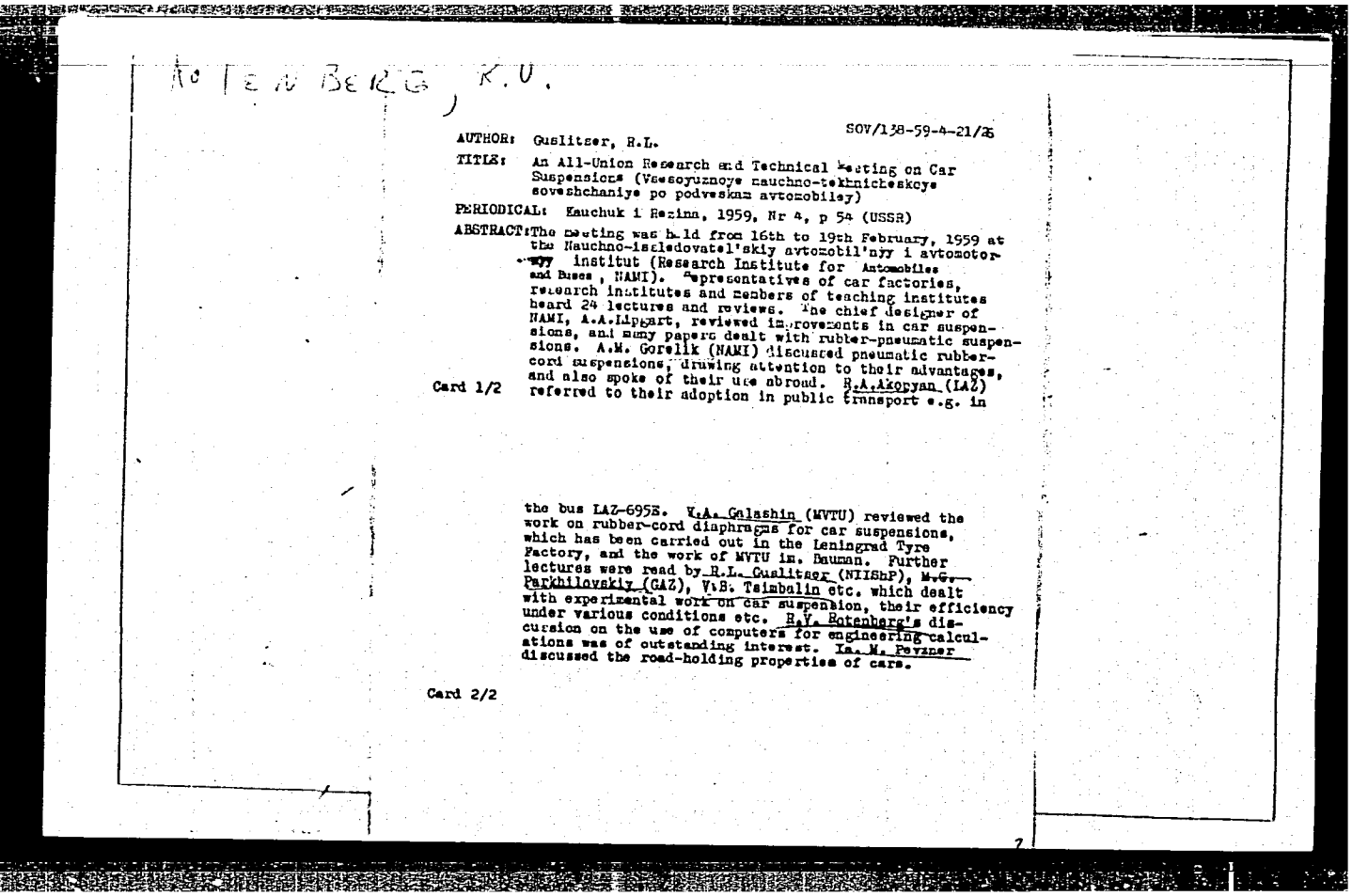
[Motor-vehicle chassis; construction and elements of design] Shassi avtomobilia; konstruktsiia i elementy rascheta. Moskva, Mashgiz, 1963. 502 p. (MIRA 16:12)
(Motor vehicles--Design and construction)

ROTENBERG, R.V., doktor tekhn. nauk

Using electronic computers in developing the theory of motor vehicles. Avt. prom. 31 no.9:28-33 S '65. (MIRA 18:9)

ROTENBERG, R.V., doktor tekhn.nauk

Problems in the development of automobiles suspensions. Avt. prom. no.5:4-10 My '60. (MIRA 14:3)
(Automobiles--Springs)



(TENBERG, K.V.)

SOV/138-59-4-21/25

AUTHOR: Guslitzer, R.L.

TITLE: An All-Union Research and Technical Meeting on Car Suspensions (Vsesoyuznoye nauchno-tekhnicheskoye soveshchaniye po podveskam avtomobiley)

PERIODICAL: Kauchuk i Rezina, 1959, Nr 4, p 54 (USSR)

ABSTRACT: The meeting was held from 16th to 19th February, 1959 at the Nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut (Research Institute for Automobiles and Buses, NAMI). Representatives of car factories, research institutes and members of teaching institutes heard 24 lectures and reviews. The chief designer of NAMI, A.A.Lipgart, reviewed improvements in car suspensions, and many papers dealt with rubber-pneumatic suspensions. A.M. Gorelik (NAMI) discussed pneumatic rubber-cord suspensions, drawing attention to their advantages, and also spoke of their use abroad. R.A.Akopyan (LAZ) referred to their adoption in public transport e.g. in

Card 1/2

the bus LAZ-695E. V.A. Galashin (MVTU) reviewed the work on rubber-cord diaphragms for car suspensions, which has been carried out in the Leningrad Tyre Factory, and the work of MVTU im. Bauman. Further lectures were read by R.L. Guslitzer (NIISHP), M.G. Parkhilovskiy (GAZ), V.B. Tsimbalin etc. which dealt with experimental work on car suspension, their efficiency under various conditions etc. E.V. Rotenberg's discursion on the use of computers for engineering calculations was of outstanding interest. Ya. M. Pevzner discussed the road-holding properties of cars.

Card 2/2

ROTENBERG, R.V., doktor tekhn.nauk.

Using distribution curves in evaluating the quality of automobile suspension. Avt. prom. no.9:28-30 S '58. (MIRA 11:10)
(Automobiles--Springs)

SOV-113-58-9-10/19

AUTHOR: Rotenberg, R.V., Doctor of Technical Sciences

TITLE: On the Evaluation of the Quality of Suspension of the Automobile by the Aid of Distribution Curves (Ob otsenke kachestva podveski avtomobilya s pomoshch'yu krivykh raspredeleniya)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 9, pp 28-30 (USSR)

ABSTRACT: The accelerograms obtained by M.I. Briskin, D.V. Gel'fgat, Ya.M., Pevzner, and A.A. Tikhonov in their theoretical and practical study of the dynamic loads appearing in truck bodies during driving on poor roads are not suitable for an evaluation of the results of trials and quality of the suspension and comparison of the smooth running of diverse automobiles. This was demonstrated by the author's tests of light cars on roads with uneven surfaces. The use of distribution curves evaluates the influence of the speed on the intensity of the fluctuations and the quality of the suspension of diverse automobiles. Experimental results con-

Card 1/2

On the Evaluation of the Quality of Suspension of the Automobile by the Aid of Distribution Curves

cerning the ZIL-151 and GAZ-63 are presented (Table 1). There are 4 graphs and 1 table.

1. Automobile industry--USSR 2. Automobiles--Test results
3. Dynamics--Applications

Card 2/2

GOL'D, B.V., doktor tekhn. nauk, prof.; ROTENBERG, R.V., doktor tekhn. nauk, prof., retsenzent; NAKHIMSON, V.A., red. izd-va; UVAROVA, A.F., tekhn. red.

[Design of motor vehicles] Konstruirovanie i raschet avtomobilia. Izd.2., perer. i dop. Moskva, Mashgiz, 1962. 463 p. (MIRA 16:5)

(Motor vehicles—Design and construction)

ROTENBERG, R.V., doktor tekhn.nauk

Characteristics of vibrations of multiaxle motor vehicles. Avt.prom. 29 no.2:30-35 F '63. (MIRA 16:2)
(Motor vehicles--Vibration)

ROTENBERG, R.V., doktor tekhn. nauk

Electronic computers and technical development in the automobile industry. Avt. prom. 29 no.4:1-6 Ap '63. (MIRA 16:6)

(Automobile industry)
(Electronic computers)

RAVKIN, Genrikh Oskarovich; ROTENBERG, R.V., doktor tekhn. nauk, retsenzent; LAPIN, A.A., kand. tekhn. nauk, red.; EL'KIND, V.D., tekhn. red.

[Pneumatic suspension of motor vehicles] Pnevmaticheskaia podveska avtomobilia. Pod red. A.A.Lapina. Moskva, Mashigz, 1962. 287 p. (MIRA 15:6)

(Motor vehicles--Springs)

ROTENBERG, Robert Vladimirovich; PEVZNER, Ya.M., doktor tekhn.nauk, retsenzent; SOBOLEV, O.K., inzh., red.; IVENSKAYA, N.D., red.izd-va; SOKOLOVA, T.F., tekhn.red.

[Automobile suspension and vibration] Podveska avtomobilia i ego kolebaniia. Izd.2., perer. i dop. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 354 p.
(MIRA 13:11)

(Automobiles--Springs)

ROTENBERG, R.V., doktor tekhn. nauk.

Using electronic calculating machines and models in studying vibrations of automobiles. Avt. prom. no.1:5-9 Ja '58. (MIRA 11:2)
(Automobiles--Vibration) (Electromechanical analogies)

ROTENBERG, R.V., doktor tekhnicheskikh nauk.

Stand testing of automobiles for contnuous vibration. Avt.i trakt.prom. no.11:19-22 N '56. (MLRA 10:1)
(Automobiels--Vibration)

ROTENBERG, R.V., doktor tekhnicheskikh nauk.

Engineering methods of calculating automobile vibration. Avt. i. trakt. prom. no.9:13-17 S '56. (MLRA 9:11)
(Automobiles--Vibration)

ROTENBERG, R.V., doktor tekhn.nauk

More about the problem of automobile suspensions. Avt. prom. 27 no. 5:8-10 My '61. (MIRA 14:5)
(Automobiles—Springs)

ROTENBERG, Robert Vladimirovich, prof.; MASHCHENKO, A.F., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[What makes an automobile ride smoothly] Plavnost' khoda avtomobilia. Moskva, nauchno-tekhn. izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1961. 78 p. (MIRA 15:2)

(Automobile engineering)

ROTENBOURG, S.

"Nephrite infectieuse originale." Rotenbourg, S., (p. 169)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1940, Volume 18, no. 2 - 3.

ROTENBERG, Samuel; BARANOWSKI, Stanislaw

Fat and cholesterol contents of milk of cows in beginning and final stages of milking. Acta physiol. Pol. 16 no.3: 465-473 My-Je ' 65

1. Katedra Fizjologii Zwierzat Wyzszej Szkoly Rolniczej w Szczecinie (Kierownik Katedry: doc. dr. S. Rotenberg).

FELINSKI, L. ROTENBERG, S.; BARANOW-BARANOWSKI, St.

Daily oscillations in motor activity of the rumen in sheep. Acta physiol. polon. 10 no.3:365-374 May-June 59.

1. Z Katedry Fizjologii Zwierzat W. S. R. w Szczecinie.
(PERIODICITY) (STOMACH, physiol.)

SAWIECKI, Arkadiusz; ROTENBERG, Samuel

Effect of bathing eggs in cobalt salt solutions on the cobalt content of indivudual organs and growth of chicks. Acta physiol. Pol. 14 no.4:441-453 Jl-Ag '63.

1. Z Katedry Ogolnej Hodowli Zwierzat Whzszej Szkoly Rolniczej (Kierownik: dr. A. Kawecki) i z Katedry Fizjologii Zwierzat Wyzszej Szkoly Rolniczej w Szczecinie (Kierownik: doc. dr. S. Rotenberg.

ROTENBERG, S.; KAVENTSKIY, A. [Kawecki, A.]

Enriching poultry meat with cobalt. Vop. pit. 23 no.1:83-84 Ja-F '64. (MIRA 17:8)

1. Iz kafedry fiziologii zhivotnykh (zav. - kand. biolog. nauk S. Rotenberg) i kafedry razvedeniya zhivotnykh (ispolnyayushchiy obyazannosti zaveduyushchego kand. biolog. nauk A. Kaventskiy) Sel'skokhozyaystvennogo instituta, TSchetsin, Pol'sha.

ROTENBERG, S. I.

Syndrome of circulatory disorders in cerebral tumors.
Nevropat. psikhiat., Moskva 19 no.4:59-64 July-Aug. 1950
(CIML 20:1)

1. Of the Clinic for Nervous Diseases (Head -- Honored Worker in Science Prof. I. N. Filimonov, Corresponding Member of the Academy of Medical Sciences USSR), Second Moscow Medical Institute imeni I. V. Stalin.

ROTENBERG, S.I.

Clinical aspects of tuberculous meningitis in adults. Klin. med., Moskva 31 no.4:40-44 Apr 1953. (CIML 24:4)

1. Of Moscow Clinical Hospital imeni Soyuz Medsantrud.

ROTENBERG, S.I.

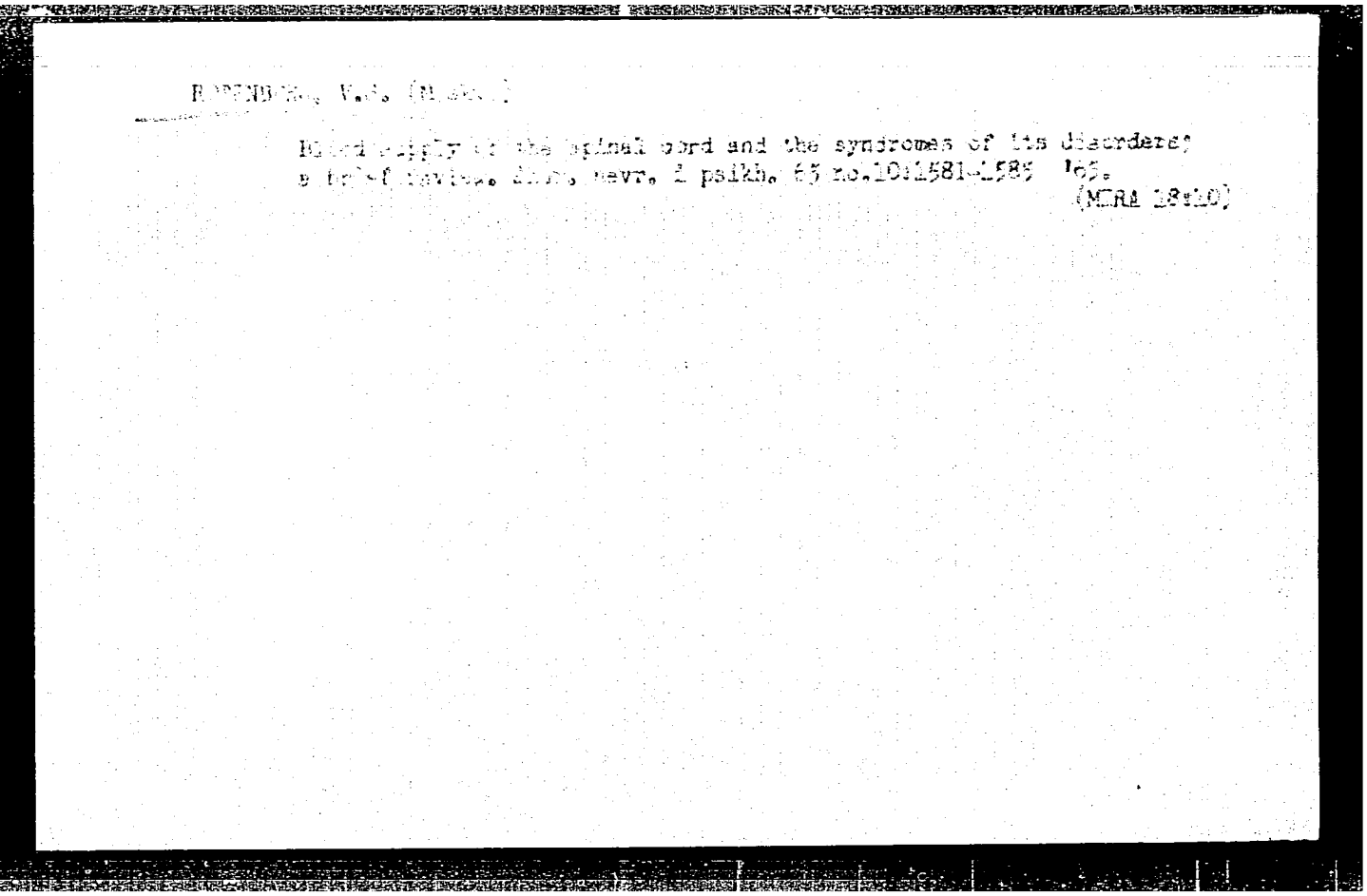
Clinical aspects of tuberculous meningitis in adults. Klin.med. 34 no. 4:40-44 Ap '53. (MLRA 6:7)

1. Moskovskaya klinicheskaya bol'nitsa imeni soyuza Medsantrud.
(Meninges--Tuberculosis)

ROTENBERG, S.N., inzh.; SLOUSHCHER, K.M., inzh.

Inertial-precipitation chamber designed to prevent ash wear of feed-water economizers. Elek. sta. 34 no.3:17-20 Mr '63. (MIRA 16:3)

(Boilers)



[illegible] V.S. [illegible]

Blood supply of the spinal cord and the syndromes of its disorders; a brief review. Zhurn. nevr. i psikh. 65 no.10:1581-1585 '65.
(MIRA 18:10)

VOLCHOK, V.I., inzh.; PARSHCHIK, S.A., kand. tekhn. nauk; POTENBERG, V.Ye., inzh.

Building and designing a compressor for raising the pressure of compressed air at the face. Trudy VNIIOMSHSa no.15:135-149 '64. (MIRA 18:2)

ACC NR: AP6035591 SOURCE CODE: UR/0364/66/002/011/1343/1345

AUTHOR: Levina, S. D.; Astakhov, I. I.; Lobanova, K. P.; Rotenberg, Z. A.

ORG: Institute of Electrochemistry, Academy of Sciences, SSSR, Moscow (Institut elektrokhimii Akademii nauk SSSR)

TITLE: Crystalline structure of phthalocyanine and the conductivity of systems which consist of metal coated with phthalocyanine film

SOURCE: Elektrokhimiya, v. 2, no. 11, 1966, 1343-1345

TOPIC TAGS: phthalocyanine, crystal structure analysis, cobalt, semiconducting film, nickel

ABSTRACT: The author report that the electrophysical properties of metal powders or polished metals coated with thin phthalocyanine films are being studied at their laboratory. The films are obtained by treating metals with phthalonitrile vapors at temperatures from 250 to 400C. The systems obtained have differing crystalline structure (α and β modifications) and varying semiconducting properties. The purpose of the present study was to investigate the structure of the films and to coordinate the data obtained with the conductivity. Cobalt and nickel were selected as substratum metals. The results obtained indicate that there is no

Card 1/2 UDC: 621.315.592:547

ACC NR: AP6035591

unequivocal relationship between the crystalline modification of both nonmetallic phthalocyanine forms and metal derivatives and the conductivity. Further investigations are being conducted to elucidate the role of other factors necessary besides the type of crystallinity for obtaining either p- or n-type conductivity of phthalocyanine films.

SUB CODE: 07,11 / SUBM DATE: 08Apr66/ ORIG REF: 006/ OTH REF: 006

Card 2/2

L 38167-66 EWP(e)/EWT(m)

ACC NR: AP6019240 (A) SOURCE CODE: UR/0364/66/002/003/0351/0353

AUTHOR: Krishtalik, L. I.; Rotenberg, Z. A.

ORG: Institute of Electrochemistry, Academy of Sciences, SSSR, Moscow (Institut elektrokhimii Akademii nauk SSSR)

TITLE: A study of the anodic oxidation kinetics of graphite

SOURCE: Elektrokhimiya, v. 2, no. 3, 1966, 351-353

TOPIC TAGS: graphite, anodic oxidation, kinetics, anode polarization, electrode, oxide formation, acid solution, electrochemical analysis, electrode potential, electric polarization, acid base equilibrium

ABSTRACT: Electrochemical oxidation of graphite was studied by analyzing polarization curves. Electrodes, fashioned into 1.5 x 1.5 x 0.5 cm spatulas from DEZ graphite, were polarized on both sides in phosphoric acid and phosphate buffer solutions, the latter sometimes containing 0.2 M Na_2SO_4. The polarization curves exhibited a semi-logarithmic dependence (φ-voltage as a function of log(i) - a/cm^3) with a slope b ranging from 160 to 180 mv. At a potential of 1.3 v relative to a water electrode in the same solution, the activation energy was 15 kcal. Similar values of b were obtained for different pH in base electrolytic solutions of 5 and 3 M perchlorate and 1.5 and 2 M sulfate. Composite data for the dependence of potential on pH in various solutions (3 M PO_4^{3-}, 5 M ClO_4^- and 1.5 M SO_4^{2-}) were presented. In some pH regions, for

Card 1/2 UDC: 541.13

all of the solutions, the electrode potential dropped about 0.06 v per unit increase in pH. In the sulfate and perchlorate solutions the potential was independent of pH below pH = 1. A gas analysis showed the principal product at the electrode to be CO_2, with CO and O_2 contents an order lower. The polarization curves were rationalized by assuming either slow decomposition of surface oxides (in the region where $\partial\varphi / \partial pH =$ 0.06 v) or slow electrochemical desorption of CO_2 upon division of water molecules ($\partial\varphi / \partial pH = 0$). The effect of the graphite surface on absorption and the injection of ions and molecules between graphite lattice planes were related to the polarization curves obtained in phosphate solutions at pH = 1 and 3. Orig. art. has: 2 figures.

SUB CODE: 07/ SUBM DATE: 30Jun65/ ORIG REF: 003/ OTH REF: 001

L 62952-65 EWT(m)/EPF(c)/EWP(j)/EWA(c) RM

ACCESSION NR: AP5020389 UR/0364/65/001/008/0993/0996
621.315.592:547

17
16
B

AUTHOR: Rotenberg, Z. A.; Levina, S. D.

TITLE: Rectifying action of phthalocyanine

SOURCE: Elektrokhimiya, v. 1, no. 8, 1965, 993-996

TOPIC TAGS: phthalocyanine, rectification, electric property, platinum, nickel, nickel compound, metal film

ABSTRACT: The following two systems were used to study rectification by phthalocyanine: Pt-nickel phthalocyanine-Hg and Ni-nickel phthalocyanine-Hg. Pure nickel phthalocyanine was deposited in the vacuum on a polished glass plate with sealed Pt contact. The second contact was mercury into which the glass plate was immersed. Powdered nickel and then nickel phthalocyanine were deposited on the Pt contact in preparing the Ni-Ni phthalocyanine-Hg system. The measurements were made in air and in a vacuum. The results show essentially no difference. The current-voltage characteristics for the two systems are shown in fig. 1 and fig. 2 of the Enclosure. According to the theory of Fan, Skimmer and Wright, the rectifying effect of dielec-

Card 1/4

L 62952-65

ACCESSION NR: AP5020389

tric films may be observed with two contacts, one of which is capable of injecting carriers into the dielectric while the other has no such properties or has them to a lesser extent. The current corresponding to the motion of carriers from the injecting contact into the film increases greatly with increase in potential and under certain conditions is limited by the space charge. In this region the current increases as the square of the potential. In the case of the two systems investigated here, injection of carriers takes place from both electrodes, but to a different extent. It is difficult to evaluate which of the electrodes injects carriers since it is necessary to know the work functions for electron emission from the metals and from nickel phthalocyanine. Heating the film reduces the electrical resistance. This reduction in resistance may be caused by a reduction in ΔE during heating of the film. Orig. art. has: 4 figures.

ASSOCIATION: Institut elektrokhimii Akademii nauk SSSR (Institute of Electrochemistry, Academy of Sciences SSSR)

SUBMITTED: 18Feb65 ENCL: 02 SUB CODE: EM, SS

NO REF SOV: 003 OTHER: 006

Card 2/4

L 62952-65
ACCESSION NR: AP5020389

ENCLOSURE: 01

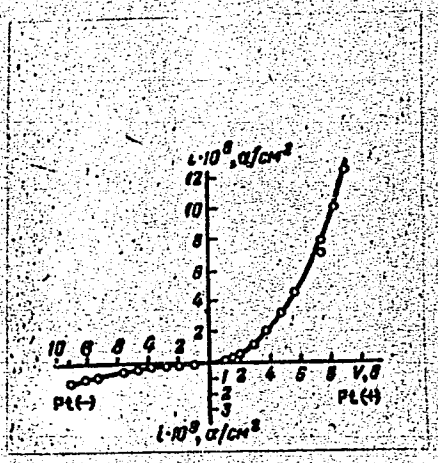


Fig. 1.
Current as a function of voltage for the Pt-Ni phthalocyanine-Hg system. Film thickness $7 \pm 2 \cdot 10^{-2}$ cm; temperature 20°C.

Card 3/4

L 62952-65

ACCESSION NR: AP5020389

ENCLOSURE: 02

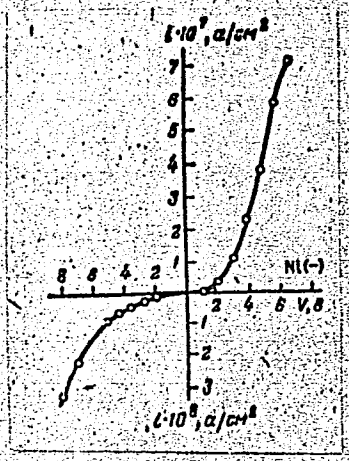


Fig. 2.
Current as a function of voltage for the Ni-Ni phthalocyanine-Hg system. Film thickness $3.5 \cdot 10^{-4}$ cm; temperature 20°C.

Card 4/4

LEVINA, S.D.; ROTENBERG, Z.A.; LOBANOVA, K.P.; ASTAKHOVA, I.I.

Electrophysical properties of systems consisting of powderlike metals and organic semiconductors. Zhur.fiz.khim. 39 no.7:1760-1763 Jl '65. (MIRA 18:8)

1. Institut elektrokhimii AN SSSR.

KRISHTALIK, L.I.; ROTENBERG, Z.A.

Overvoltage of the anodic evolution of chlorine on graphite. Part 1. Zhur. fiz. khim. 39 no.2:328-334 F '65. (MIRA 18:4)

1. Gosudarstvennyy komitet khimicheskoy i neftanoy promyshlennosti, Moskva.

ROTENBURG, I.S., dots., kand. tekhn. nauk; POLYAKOV, M.P., otv. za vypusk; ZENIN, V.V., tekhn. red.

[Problems of the hydraulic design and designation of spans of bridges crossing lowland rivers] Voprosy gidravlicheskogo rascheta i naznacheniia otverstii mostov na perekhodakh cherez ravninnye reki. Saratov, Izd-vo Saratovskogo univ., 1960. 231 p. (MIRA 14:11)
(Bridges—Design)

ROTENBURG, Iosif Solomonovich, kand. tekhn. nauk, dots.; POLYAKOV, Mikhail Pavlovich, kand. tekhn. nauk, dots.; ZOLOTAREV, Nikolay Vasil'yevich, kand. tekhn. nauk, dots.; LAVROVSKIY, Vadim Aleksandrovich, inzh.; DADENKOV, Yu.N., doktor tekhn. nauk, prof., retsenzent; BEGAM, L.G., kand. tekhn. nauk, retsenzent; BORODINA, N.N., red.

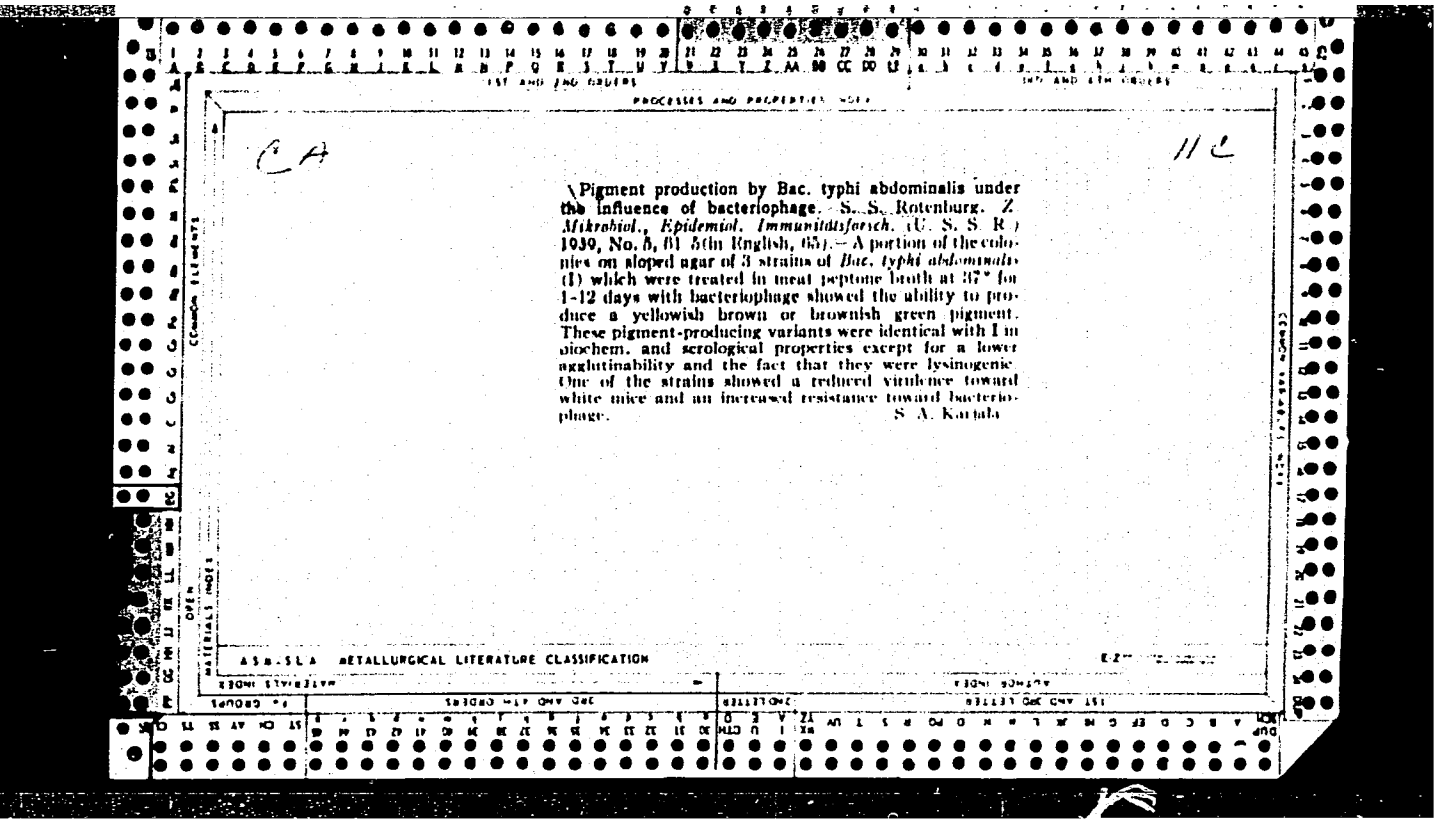
[Designing bridge crossings over large streams] Proektirovanie mostovykh perekhodov cherez bol'shie vodotoki. Moskva, Vysshaia shkola, 1965. 335 p. (MIRA 18:6)

1. Chlen-korrespondent AN Ukr.SSR (for Dadenkov). 2. Rukovoditel' laboratorii mostovoy gidravliki i gidrologii TSental'nogo nauchno-issledovatel'skogo instituta svyazi (for Begam).

ROTENBURG, L. M.

"Experimental Investigation of Steel Lines and the Analytical Calculation of Short-Circuit Currents in Complicated Networks with Steel Lines." Official opponents: N. N. Shchedrin, Professor, doctor of Technical Sciences and G. R. Rakhmov, Docent. Candidate of Technical Sciences.

Dissertation for the Degree of Candidate of Technical Sciences, Defended at Inst Power Engineering AS Uzbek SSR. February 21, 1953. (Elektrichestvo, 1958, Nr 6, pp 93-93)

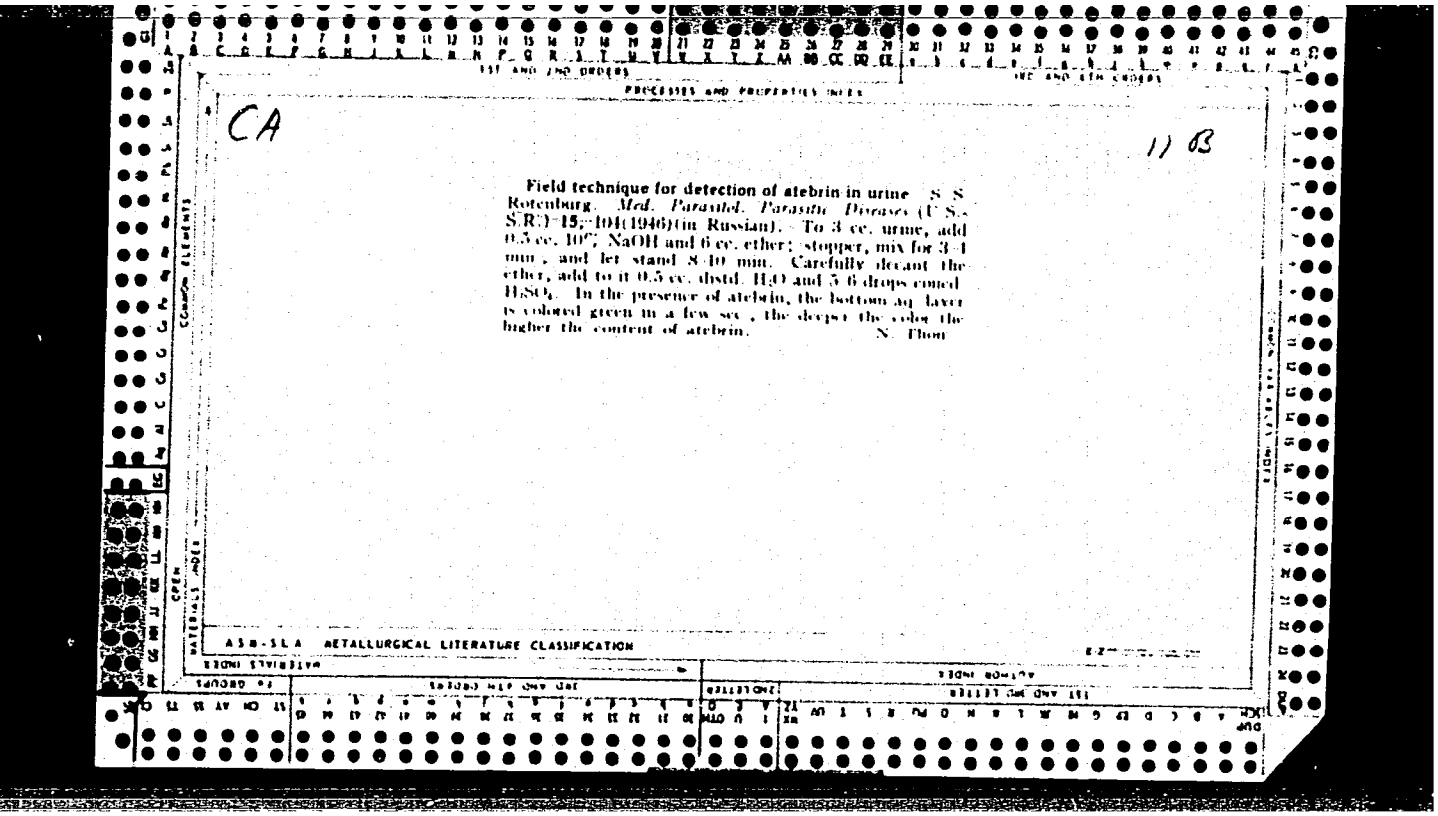


CA

11 C

Pigment production by Bac. typhi abdominalis under the influence of bacteriophage. S. S. Rotenburg. *Z. Mikrobiol., Epidemiol. Immunitätsforsch.* (U. S. S. R.) 1939, No. 5, 61 5(in English, 65).—A portion of the colonies on sloped agar of 3 strains of *Bac. typhi abdominalis* (I) which were treated in meat peptone broth at 37° for 1-12 days with bacteriophage showed the ability to produce a yellowish brown or brownish green pigment. These pigment-producing variants were identical with I in biochem. and serological properties except for a lower agglutinability and the fact that they were lysinogenic. One of the strains showed a reduced virulence toward white mice and an increased resistance toward bacteriophage. S. A. Kartalo

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

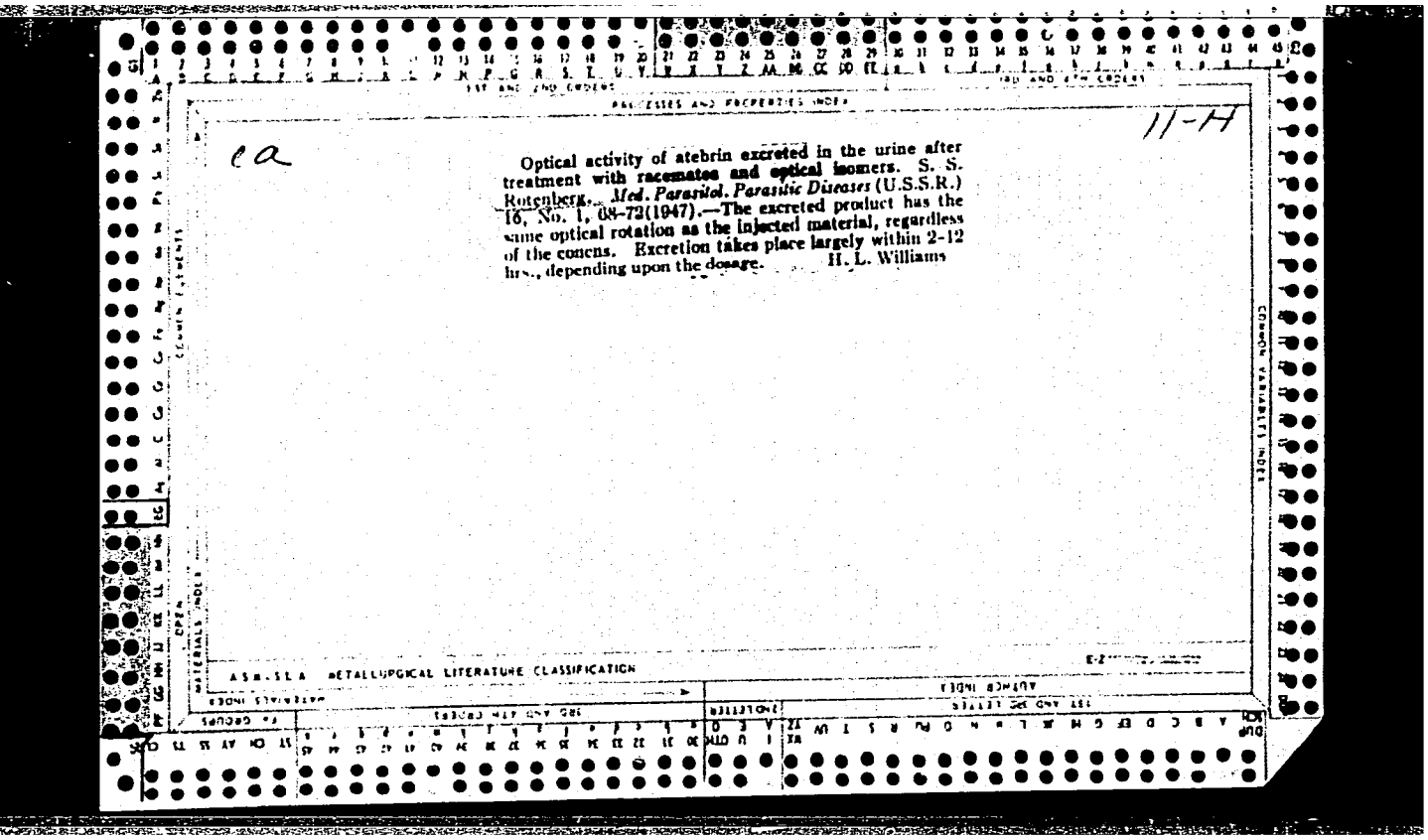


CA

11 63

Field technique for detection of atebrin in urine. S. S. Rotenburg. *Med. Parasitol. Parasitic Diseases* (U.S.S.R.) 15, 101(1946)(in Russian). To 3 cc. urine, add 0.5 cc. 10% NaOH and 6 cc. ether; stopper, mix for 3–4 min., and let stand 8–10 min. Carefully decant the ether, add to it 0.5 cc. distd. H_2O and 5–6 drops concd. H_2SO_4. In the presence of atebrin, the bottom aq. layer is colored green in a few sec., the deeper the color the higher the content of atebrin. N. Thon

A 5 8 - 5 L A METALLURGICAL LITERATURE CLASSIFICATION



11-H

ca

Optical activity of atebrin excreted in the urine after treatment with racemates and optical isomers. S. S. Rotenberg. *Med. Parasitol. Parasitic Diseases* (U.S.S.R.) 16, No. 1, 68–72(1947).—The excreted product has the same optical rotation as the injected material, regardless of the concns. Excretion takes place largely within 2–12 hrs., depending upon the dosage. H. L. Williams

ROTE'BURG, S. S.

"Test of Neoplasmochin for the Treatment of Malaria", Med. Paraz. i Paraz. Bolez., Vol. 17, No. 4, pp 317-18, 1948.

ROTENBURG, S.S.; BUTYAGINA, A.P.; NOVOSELOVA, Ye.I.

Study of clinical and laboratory characteristics in patients with frequent recurrences of malaria. Med.paraz.i paraz.bol. no.5:430-433 S-O '53. (MLRA 6:12)

1. Iz klinicheskogo otdeleniya Instituta malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (direktor instituta - professor P.G.Sergiyev, zaveduyushchiy otdeleniyem - professor Ye.M.Tareyev). (Malarial fever)

ROTENBURG, S.S.

Circulation of antimalarial preparations in the organism.
Sovet med. 17 no.11:9-12 Nov 1953. (CLML 25:5)

1. Of the Clinic (Head --Prof. Ye. M. Tareyev, Active Member AMS USSR) of the Institute of Malaria, Medical Parasitology and Helminthology (Director -- Prof. P.G. Sergiyev, Active Member USSR), Ministry of Public Health USSR.

ROTENBURG, S.S.

Effect of a feverish condition on the concentration of quinine in blood and its secretion in urine. Med.paraz. i paraz.bol. 26 no.1: 58-60 Ja-F '57. (MLRA 10:6)

1. Iz klinicheskogo sektora Instituta malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (dir. instituta - prof. P.G.Sergiyev, zav. otdeleniyem - prof. Ye.M.Tareyev).

(FEVER, eff.
on quinine level in blood & on its excretion in urine)
(QUININE, in blood
eff. of fever on level in blood & urine, eff. of fever on its level)

ROTENBERG S. S.

PA 17T37

USSR/Medicine - Malaria, Tertian May/Jun 1947
Medicine - Achrichine

"The Treatment of Malaria Tertiana with Acrichine Isomers," S. S. Rotenberg, Clinical Department of the Institute of Malaria and Medical Parasitology, 6 pp

"Meditsinskaya Parazitologiya" No 3

Results of observation of 71 patients, 42 treated with levo-acrichine and 29 with dextro-acrichine, ages from 6 to 58 years - 39 women and 32 men, 50 Europeans, 18 Uzbeks and Tadjiks, and 3 Koreans.

17T37

USSR / Pharmacology, Toxicology. General Problems. V

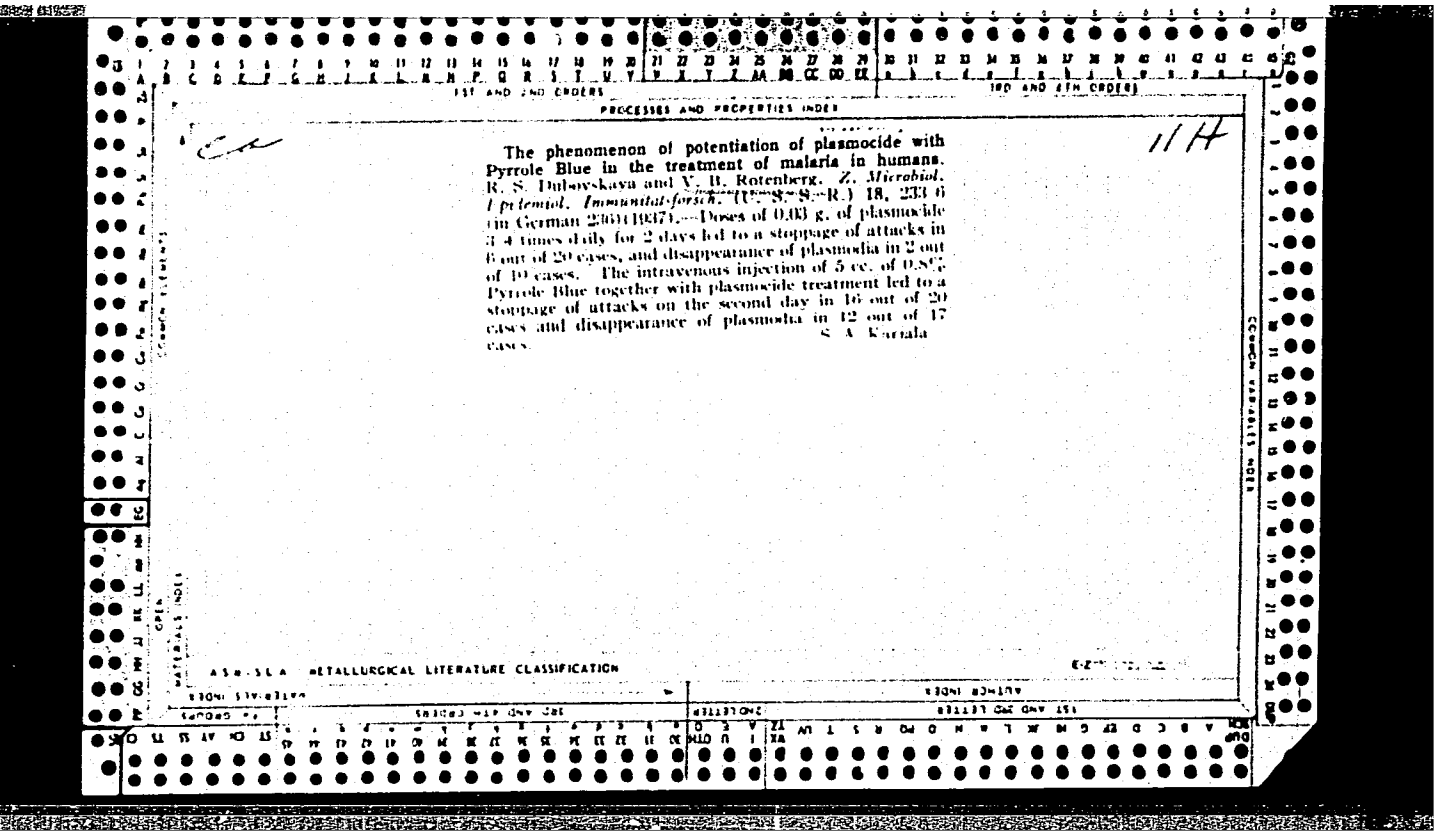
Abs Jour: Ref Zhur-Biol., No 9, 1958, 42197.

Abstract: in the urine was noted. In patients in whom a single dose of Q controlled the attacks and caused the disappearance of the Plasmodium, the maximum Q blood concentration was 4.5-25 mg/C. In patients in whom Plasmodium failed to disappear, the Q concentration was 2.5-9 mg/C. In a patient in whom Q did not produce a cessation of attacks, the maximal Q content in the blood was 3.7 mg./l. However, even very high blood Q concentrations following a single administration of Q did not prevent a recurrence on the 14th day following the administration of the drug.

Card 2/2

ROTENBERG, V.A.; SHABAYEVA, M.F.

K. Marx, F. Engels, and V.I. Lenin on technical education.
Politekh.obuch. no.11:9-17 N '57. (MIRA 10:10)
(Technical education) (Lenin, Vladimir Il'ich, 18-1924)
(Marx, Karl, 1818-1883) (Engels, Friedrich, 1820-1895)



PROCESSES AND PROPERTIES INDEX

The phenomenon of potentiation of plasmocide with Pyrrole Blue in the treatment of malaria in humans. R. S. Dubovskaya and V. B. Rotenberg. *Z. Mikrobiol. Epidemiol. Immunitätsforsch.* (U.S.S.R.) 18, 233-6 (in German 236) (1937).—Doses of 0.03 g. of plasmocide 3-4 times daily for 2 days led to a stoppage of attacks in 6 out of 20 cases, and disappearance of plasmodia in 2 out of 10 cases. The intravenous injection of 5 cc. of 0.8% Pyrrole Blue together with plasmocide treatment led to a stoppage of attacks on the second day in 16 out of 20 cases and disappearance of plasmodia in 12 out of 17 cases. S. A. Kurnala

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

AUTHOR: Rotenberg, V.G. 119-58-4-8/15

TITLE: A Device for the Determination of the Quality of the Clockwork Gear-Engagement (Pribor dlya opredeleniya plavnosti zatsepleniya mekhanizma chasov)

PERIODICAL: Priborostroyeniye, 1958, Nr 4, pp. 19-20 (USSR)

ABSTRACT: The device is used for measuring the mechanical parts of the clock "Zarya". The quality of the clockwork gear-engagement is determined from the diagrams obtained. The revolving velocity of the escapement wheel, which must be equal at every point of time, is taken as a criterion of quality.
The device consists of five main parts: A connecting part for the clock mechanism, the optical system, tube amplifier, a recording device, and a mechanism for transporting the recording strip.
The motor axis of a small motor (n = 2 Um) is connected by way of springs with the escapement wheel of the clock. A very finely focused beam of light is directed upon the gears to be investigated. This beam, only part of which is allowed to pass through, impinges upon a photoelement. The electron currents thus generated

Card 1/2

A Device for the Determination of the Quality of the Clockwork Gear-Engagement

119-58-4-8/15

are then recorded on a band moving with constant velocity over an electronic recording device. From the representation by curves (number of maxima) obtained the quality of the engagement can be determined. There are 3 figures.

Card 2/2

ROTENBERG, V.G.

Instrument for determining the smoothness of watch mechanism engagement. Priborostroenie no.4:19-20 Ap '58. (MIRA 11:5)
(Electronic instruments)
(Clocks and watches--Testing)

ROTENBERG, V. G.

119-1-12/13

AUTHOR: Rotenberg, V. G.

TITLE: Apparatus for the Determination of the Moment of the Balance Wheel of a Watch-Mechanism (Pribor dlya opredeleniya momenta na ankernom kolese chasovogo mekhanizma).

PERIODICAL: Priborostroyeniye, 1958, Nr 1, pp. 31-32 (USSR)

ABSTRACT: An apparatus was constructed which permits to measure directly the moment of force of the balance wheel of the "Comet" watch with numerical registration in mg/mm. The use of this apparatus for other watches calls only for small alterations and a resetting of equilibrium. Including the balance wheel to be investigated this apparatus is an electric motor of the condenser type. The condenser- and control windings are mounted on the four-pole stator. They are wound on 4 hard rubber frames and are in pairs connected in series. The pole pieces are made of siliceous steel. On the other side they are connected with a low-carbon iron ring. The balance wheel to be investigated is used as rotor of the motor. The diagram of connections is simple: the control winding of the motor is fed through the potentiometer. The condenser winding is directly fed with 127 through a condenser.

Card 1/2

ROTENBERG, V.G.

Instrument for determining the moment of watch escape wheels.
Priborostroenie no.1:31-32 Ja '58. (MIRA 11:2)
(Clocks and watches)
(Electric instruments)

MAKAROVA, Ye.V., assistent; KOLOMOYTSEVA, I.P., assistent; ROTENBERG, V.S., [illegible] VI kursa

Modern concepts of the blood supply in the spinal cord. Trudy 1-go MMI 38:27-37 '65. (MIRA 18:10)

IVANENKO, P.D.; ROTENBERG, V.V.

Culturability of B.Alkalescens in 1957 and 1958 in the Ordzhonikidze District of Kharkov. Lab. delo 7 no.6:26-28 Je '61. (MIRA 14:7)

1. Sanitarno-epidemiologicheskaya stantsiya Ordzhonidzevskogo rayona (glavnyy vrach S.I.Lantsberg), Khar'kov.
(KHARKOV--SHIGELLA ALKALESCENS)

USSR / Human and Animal Morphology - Digestive Tract S

Abs Jour : Ref. Zhur. - Biol., No. 22, 1958, No. 101432

Author : Rotenberg, Ya. A.; Rabovskaya, A. Ye.
Inst : -
Title : Surgical Anatomy in Injuries of the Organs of the Peritoneal Cavity.

Orig Pub : In the collection: Neotlozhnaya khirurgiya organov bryushnoy polosti. Kiev, Gosmedizdat, UkrainianSSR, 1955, 225-232.

Abstract : No abstract.

Card 1/1

ROTENBERG, Ye.K. (Chernovtsy)

Experiment in setting norms for textile fabric expenditure.
Shveĭn.prom. no.6:28-31 N-D '62. (MIRA 15:12)
(Garment cutting)

EPSHTEYN, M.M.; ROTENBERG, Yu.S.

Effect of volatile phytoncides on the amount of sulfhydryl groups and the activity of thiolic enzymes in peripheral nerves. Ukr.biokhim.zhur. '31 no.2:196-203 '59. (MIRA 12:6)

1. Department of Biochemistry of the Kiyev Medical Institute.
(PHYTONICIDES) (MERCAPTO GROUP) (NERVES)

ROTENBERG, [illegible] LEVINA, S.D.

Rectification effect of phthalocyanine. Elektrokhimiia 1 no.8:993-996 Ag '65. (MIRA 18:9)

1. Institut elektrokhimii AN SSSR.

KRISHTALIK, L.I.; ROTENBERG, Z.A.

Overvoltage of anodic separation of chlorine on graphite. Part 2. Zhur. fiz. Khim. 39 no.4:907-912 Ap '65. (MIRA 19:1)

1. Submitted Nov. 19, 1963.

L 63469-65 EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EWP(j)/T/EWP(t)/EWP(k)/
EWP(z)/EWP(b)/EWA(c) IJP(c) JD/HW/RM

ACCESSION NR: AP5019796 UR/0076/65/039/007/1760/1763
541.13

AUTHOR: Levina, S. D.; Rotenberg, Z. A.; Lobanova, K. P.; Astakhova, I. I.

TITLE: Electric properties of systems consisting of powdered metals and organic semiconductors

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 7, 1965, 1760-1763

TOPIC TAGS: phthalonitrile, powder metal, nickel phthalocyanine, cobalt phthalocyanine, organic semiconductor, electric conductivity, thermoemf

ABSTRACT: Systems made up of powdered nickel and cobalt and the semiconducting compound phthalocyanine were prepared in a vacuum at 250-400°C by reacting phthalonitrile vapors with the powdered metals, on the surface of which a phthalocyanine film was formed. The powders were pressed into tablets, and the electrical conductivity σ and thermoemf α were measured. The data for all samples obey the equation $\sigma = \sigma_0 \exp(-\Delta E/kT)$. The thermoemf was found to be virtually independent of the temperature, indicating an activation of conduction due to an increase in the carrier mobility. The semiconductor-type relation observed between the conductivity and the

Card 1/2

L-63469-65

ACCESSION NR: AP5019796 6

temperature indicates that the electric current, in passing from one metallic grain to the next, traverses thin films of metal phthalocyanine, which sheathes these grains. The observed increase in electrical conductivity with rising temperature of the reaction by which the samples were prepared is attributed to the fact that the role of the thinnest nickel and cobalt phthalocyanine films in the conduction is strongly enhanced: as the temperature rises, the phthalocyanine vapors diffuse deeper into the channels and pores of the powder, forming thin films of phthalocyanines (10^{-5}-10^{-6} cm); at the same time, the breakdown of certain metallic grains probably takes place. Thus, the surface of the metals increases, the phthalocyanine films become thinner, and the conductivity rises. "We thank Academician A. N. Frumkin for his interest and for reviewing the results." Orig. art. has: 4 figures, 2 tables.

ASSOCIATION: Institut elektrokhimii, Akademiya nauk SSSR (Institute of Electrochemistry, Academy of Sciences SSSR)

SUBMITTED: 24Apr64 ENCL: 00 SUB CODE: EM, SS

NO REF SOV: 007 OTHER: 007

bob

Card 2/2

PA 31/49T19

USSR/Medicine - Pleuropneumonia Oct 48
Medicine - Pain, Effects

"Pain as an Important Factor in Pulmonary Hypoventilation," M. Z. Rotenfel'd, Chair of Roentgenol, Leningrad State Ord of Lenin Inst for Advancement of Doctors imeni S. M. Kirov, Tuberculosis Dept, Clinical Hosp imeni Kuybyshev, 6½ pp

"Klin Med" Vol XXVI, No 10

Painful sensations, whatever their etiology, considerably restrict movements of ribs and diaphragm of the corresponding half of the thoracic cavity, and decrease respiratory movements in the opposite side. Pleuropneumonia is

31/49T19

USSR/Medicine - Pleuropneumonia (Contd) Oct 48

accompanied by considerable pulmonary hypoventilation of the infected lung, and decrease in function of the other lung. These functional retardations are not observed in bronchopneumonia. Pulmonary and abdominal wounds and operations cause severe pulmonary hypoventilation due to acute pains. One must refrain from therapeutic measures leading to post-operational "rest" with subsequent hypoventilation. Pneumosclerosis is compatible with satisfactory costal respiration.

31/49T19

ROTENFEL'D, M. Z.

PA 66/49T70

ROTENFEL'D, M. Z.

USSR/Medicine - Respiration Mar/Apr 49
Paralysis, Phrenic

"Roentgenological Studies of the Mechanisms of Pulmonary Respiration Under Conditions of Artificial Paralysis of the Diaphragm," M. Z. Rotenfel'd, Cand Med Sci, Chair of Roentgenol, State Ord of Lenin Inst for Advancement of Doctors imeni S. M. Kirov, Tuberculosis Dept, Hosp imeni Kuybyshev, 7 pp

"Prob Tuber" No 2

Analytic data of functional roentgenological studies reveal a functional displacement of the respirational mechanism in connection with paralysis of the diaphragm. This is indicated by severe disruption in the pulmonary apparatus. The diaphragm ceases acting as an active respirational factor, and takes up about two thirds of the weight of the pulmonary ventilation mechanism's total balance. This is due to paralysis caused by the interference. Gives illustrations of roentgenological test results.

66/49T70

ROTENFELD, M. Z.

Roentgenological observations of the mechanism of pulmonary ventilation in extensive superior-posterior thoracoplasty. Khirurgiia, Moskva no.8:68-73 Aug. 1950. (CIML 20:1)

1. Of the Roentgenological Staff (Head -- Prof. D. S. Lindenbraten), Leningrad State Order of Lenin Institute for the Advanced Training of Physicians imeni S. M. Kirov, and of the Tuberculosis Division (Head -- Docent D. L. Berkhman) of the Hospital imeni Kuybyshev.

ROTENFEL'D, M.Z., kandidat meditsinskikh nauk.

"Explosive" pulsation of the heart and of large vessels in pneumothorax. Vest.rent.i rad. no.5:24-30 S-O '53. (MLRA 7:1)

1. Iz tuberkuleznogo ob"edineniya Leninskogo rayona Leningrada (glavnyy vrach K.I.Andreyev, nauchnyy rukovoditel' - dotsent D.L.Berkhman). (Pneumothorax) (Pulse)